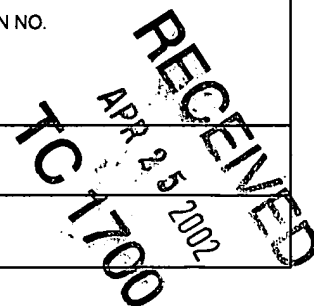
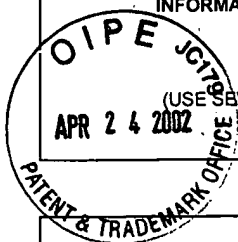


FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.  
ASMMC.030AUSAPPLICATION NO.  
09/801,542INFORMATION DISCLOSURE STATEMENT  
BY APPLICANT

(USE SEVERAL SHEETS IF NECESSARY)

APPLICANT  
Bondestam et al.FILING DATE  
March 7, 2001GROUP  
1763

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (IF APPROPRIATE)
W	4,222,576	9/16/80	Clements	—	—	
	4,889,319	12/26/89	Phillips et al.	—	—	
	5,314,574	5/24/94	Takahashi	—	—	
	5,520,743	5/28/96	Takahashi	—	—	
	5,709,757	1/20/98	Hatano et al.	—	—	
	5,885,353	3/23/99	Strodtbeck et al.	—	—	
	5,891,251	4/6/99	MacLeish et al.	—	—	
	6,054,688	4/25/00	Moschini	—	—	
	6,120,609	9/19/00	Selyutin et al.	—	—	
	6,125,859	10/3/00	Kao et al.	—	—	
	6,174,377 B1	1/16/01	Doering et al.	—	—	
	6,350,319 B1	2/26/02	Curtis et al.	—	—	
W	US 2001/0035127 A1	11/1/01	Metzner et al.	—	—	

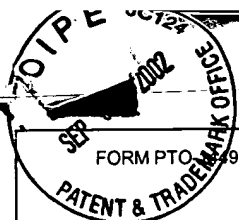
## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

EXAMINER INITIAL	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

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EXAMINER	<i>W. M. M.</i>	DATE CONSIDERED	11/7/02
<p>*EXAMINER: INITIAL IF CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED, INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.</p>			



FORM PTO-1009

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.  
ASMMC.030AUSAPPLICATION NO.  
09/801,542SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT  
BY APPLICANT

(USE SEVERAL SHEETS IF NECESSARY)

APPLICANT  
Bondestam et al.FILING DATE  
March 7, 2001GROUP  
1763

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (IF APPROPRIATE)
WA	6,306,216 B1	10/23/01	Kim et al.	—	—	

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TC 1700EXAMINER *W. S. Munn*DATE CONSIDERED *11/7/02*

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APPLICANT  
Bondestam et al.FILING DATE  
March 7, 2001GROUP  
Unknown

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (IF APPROPRIATE)
wn	1	4,058,430	11/15/77	Suntola et al.	156	611	11/25/75
	2	4,389,973	06/28/83	Suntola et al.	118	725	12/11/81
	3	4,413,022	11/01/83	Suntola et al.	427	255.2	06/21/79
	4	4,747,367	05/31/88	Posa	118	715	06/12/86
	5	4,761,269	08/02/88	Conger et al.	422	245	06/12/86
	6	4,836,138	06/06/89	Robinson et al.	118	666	06/18/87
	7	4,993,357	02/19/91	Scholz	118	715	12/21/89
	8	5,071,670	12/10/91	Kelly	427	38	06/11/90
	9	5,281,274	01/25/94	Yoder	118	697	02/04/93
	10	5,294,572	03/15/94	Granneman et al.	437	225	07/21/93
	11	5,306,666	04/26/94	Izumi	437	192	07/21/93
	12	5,711,811	01/27/98	Suntola et al.	118	711	
	13	5,769,950	06/23/98	Takasu et al.	118	715	06/23/98
	14	5,855,680	01/05/99	Soininen et al.	118	719	
	15	5,879,415	03/09/99	Shimada	29	25.01	01/21/98
	16	5,916,365	06/29/99	Sherman	117	92	08/16/96
	17	6,015,590	01/18/00	Suntola et al.	427	255.23	
	18	6,042,652	03/28/00	Hyun et al.	118	719	09/07/99
wn	19	US 6,167,834 B1	01/02/01	Wang et al.	118	723 E	08/13/92

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
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wn	20	WO 96/17107	06.06.96	PCT	1	1		
wn	21	WO 00/40772	13.07.00	PCT	1	1		
wn	22	WO 00/47404	17.08.00	PCT	1	1		

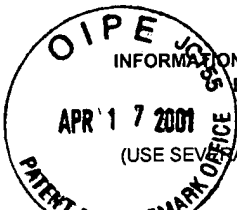
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FORM PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. ASMMC.030AUS	APPLICATION NO. 09/801,542
		APPLICANT Bondestam et al.	
		FILING DATE March 7, 2001	GROUP Unknown

EXAMINER INITIAL	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)	
Wm	23	B. Abeles et al., "Amorphous Semiconductor Superlattices," <u>Physical Review Letters</u> , Vol. 51, No. 21, pp. 2003-2006 (November 1983). ✓
	24	C. Döscö et al., "Deposition of Tin Oxide into Porous Silicon by Atomic Layer Epitaxy," <u>J. Electrochem. Soc.</u> , Vol. 143, No. 2, pp. 683-687 (February 1996). ✓
	25	L. Hiltunen et al., "Nitrides of Titanium, Niobium, Tantalum and Molybdenum Grown as Thin Films by the Atomic Layer Epitaxy Method," <u>Thin Solid Films</u> , Vol. 166, pp. 149-154 (1988). ✓
	26	Y. Horike et al., "Filling of Si Oxide into a Deep Trench Using Digital CVD Method," <u>Applied Surface Science</u> , Vol. 46, pp. 168-174 (1990). ✓
	27	T. Kaizuka et al., "Conformal Chemical Vapor Deposition TiN (111) Film Formation as an Underlayer of Al for Highly Reliable Interconnects," <u>Jpn. J. Appl. Phys.</u> , Vol. 33, Part 1, No. 1B, pp. 470-474 (January 1994). ✓
	28	K. Kukli et al., "Atomic Layer Epitaxy Growth of Tantalum Oxide Thin Films from Ta (OC <sub>2</sub> H <sub>5</sub> ) <sub>5</sub> and H <sub>2</sub> O," <u>J. Electrochem. Soc.</u> , Vol. 142, No. 5, pp. 1670-1674 (May 1995). ✓
	29	K. Kukli et al., "Influence of atomic layer deposition parameters on the phase content of Ta <sub>2</sub> O <sub>5</sub> films," <u>Journal of Crystal Growth</u> , Vol. 212, pp. 459-468 (2000). ✓
	30	M. Leskelä et al., "Atomic Layer Epitaxy in Deposition of Various Oxide and Nitride Thin Films," <u>Journal de Physique IV</u> , Vol. 5, pp. C5-937-C5-951 (June 1995). ✓
	31	P. Martenson et al., "Use of Atomic Layer Epitaxy for fabrication of Si/TiN/Cu Structures," <u>J. Vac. Sci. Technol. B</u> , Vol. 17, No. 5, pp. 2122-2128 (September/October 1999). ✓
	32	J. Min et al., "Atomic Layer Deposition of TiN Thin Films by Sequential Introduction of Ti Precursor and NH <sub>3</sub> ," <u>Mat. Res. Soc. Proc.</u> , Vol. 514, pp. 337-342 (1998). ✓
	33	J. Min et al., "Atomic Layer Deposition of TiN Films by Alternate Supply of Tetrakis (ethylmethylamino) - Titanium and Ammonia, <u>Jpn. J. Appl. Phys.</u> , Vol. 37, Part 1, No. 9A, pp. 4999-5004 (September 1998). ✓
	34	L. Niinistö et al., "Synthesis of Oxide Thin Films and Overlayers by Atomic Layer Epitaxy for Advanced Applications," <u>Materials Science and Engineering</u> , Vol. B41, pp. 23-29 (1996). ✓
	35	M. Putkonen, "Surface-controlled growth of magnesium oxide thin films by atomic layer epitaxy," <u>Journal of Materials Chemistry</u> , Vol. 9, pp. 2449-2452 (1999). ✓
	36	J. Rautanen et al., "The effect of growth parameters on the deposition of CaS thin films by atomic layer epitaxy," <u>Applied Surface Science</u> , Vols. 82/83, pp. 553-558 (1994). ✓
	37	M. Ritala et al., "Atomic Layer Epitaxy Growth of TiN Thin Films from TiI <sub>4</sub> and NH <sub>3</sub> ," <u>J. Electrochem. Soc.</u> , Vol. 145, No. 8, pp. 2914-2920 (August 1998). ✓
	38	M. Ritala et al., "Perfectly Conformal TiN and Al <sub>2</sub> O <sub>3</sub> Films Deposited by Atomic Layer Deposition," <u>Chemical Vapor Deposition</u> , Vol. 5, No. 1, pp. 7-9 (1999). ✓
	39	H. Sakaue et al., "Digital Chemical Vapor Deposition of SiO <sub>2</sub> Using a Repetitive Reaction of Triethylsilane/Hydrogen and Oxidation," <u>Japanese Journal of Applied Physics</u> , Vol. 30, No. 1B, pp. L124-L127 (January 1990). ✓
	40	O. Sneh et al., "Atomic Layer Growth of SiO <sub>2</sub> on Si(100) Using SiCl <sub>4</sub> and H <sub>2</sub> O in a Binary Reaction Sequence," <u>Surface Science</u> , Vol. 334, pp. 135-152 (1995). ✓
	41	Tuomo Suntola, "Atomic Layer Epitaxy," <u>Handbook of Crystal Growth 3. Thin Films and Epitaxy. Part B: Growth Mechanisms and Dynamics</u> , pp. 601-663, D. T. J. Hurle, Ed., Elsevier (1994). ✓
	42	T. Suntola, "Atomic Layer Epitaxy," <u>Materials Science Reports 4</u> , pp. 261-312 (1989). ✓
	43	T. Suntola, "Atomic Layer Epitaxy," <u>Thin Solid Films</u> , Vol. 216, pp. 84-89 (1992). ✓
	44	H. Virola et al., "Controlled growth of tin dioxide thin film by atomic layer epitaxy," <u>Thin Solid Films</u> , Vol. 249, pp. 144-149 (1994). ✓
Wm	45	M. Wise et al., "Diethyldiethoxysilane as a New Precursor for SiO <sub>2</sub> Growth on Silicon," <u>Mat. Res. Soc. Symp. Proc.</u> , Vol. 334, pp. 37-43 (1994). ✓
	46	<del>Merkku-Ylilampi et al., "Luku VII. Ohutkalvotekniikka," <u>Työteknikka</u>, pp. 253-261 (1986). ✓</del>

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